DOCUMENT RESUME

ED 303 105 HE 022 131

AUTHOR	Enslev, Lisbeth; And Others
TITLE	Changing Patterns of Finance in Higher Education. Country Study: Denmark. OECD Educational Monographs.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France).
PUB DATE	Oct 88
NOTE	37p.
AVAILABLE FROM	OECD, 2, rue Andre Pascal, 75775 Paris CEDEX 16 France.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Access to Education; *Educational Finance; Educational Planning; Finance Reform; Financial Support; Government School Relationship; *Higher Education; National Programs; *Public Policy; State Aid
IDENTIFIERS	*Denmark

ABSTRACT

A country study on Denmark is presented as part of a series prepared by the Organisation for Economic Cooperation and Development (OCED) Education Committee activity on changing patterns of finance in higher education. In Denmark, postsecondary institutions are the direct responsibility of the state. Some central problems are to strike a balance between the supply and demand for graduates, draw up a plan in conformity with financial realities and the intentions of public authorities, and implement plans bearing in mind the traditional autonomy of higher education institutions. Attention has focused on the intake of students, the fixing and distribution of total resources, and planning of the structure and content of studies. Using a system of central planning, the Danish accept students to courses with good rather than bad employment prospects and to courses rationally distributed among the institutions. This system signals which courses will offer good employment prospects. Admission policies are linked to the availability of resources. By the integrated planning of admissions and financial aspects, courses can be reoriented in the desired direction. This budget model is supplemented by new planning instruments. The change comprises a number of financial aspects, including the possible introduction of fees for certain higher education courses and the option of institutions raising revenue for their own consumption by marketing courses and other products. Twelve statistical tables are appended.. Contains 22 references. (SM)

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ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

GENERAL DISTRIBUTION

Paris, October 1988

English text only

CHANGING PATTERNS OF FINANCE IN HIGHER EDUCATION

COUNTRY STUDY: **DENMARK**

This report is one of a series of country studies prepared in the framework of the OECD Education Committee activity on Changing Patterns of Finance in Higher Education. These studies have provided the background information for the preparation of a general report on this topic that will be published by the OECD.

The country study on Denmark has been written by Lisbeth Enslev, Jorgen Bassé and Ole Stigaard, Directorate for Further and Higher Education, Ministry of Education and Research (Denmark). The views expressed are those of the authors and do not necessarily commit the national authorities concerned or the Organisation.

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15683

CONTENTS

EXECUTIVE SUMMARY		iii
I.	INTRODUCTION	1
II.	CHARACTERISTICS	1
III.	FINANCING MECHANISMS	3
IV.	STUDENT SUPPORT	6
V.	EFFECTS OF THE FINANCIAL ARRANGEMENTS	12
VI.	FUTURE DEVELOPMENTS IN FINANCING	18
TABLES		23
REFERENCES		28

EXECUTIVE SUMMARY

A number of the current problems related to the financing of higher education in Denmark are the same as in the 1970s. But this does not mean that no attempts have been made to solve them nor that these attempts have been unsuccessful.

The central problems that remain are first and foremost: to strike a balance between the supply of and the demand for graduates; to draw up a plan which is in conformity with financial realities and the intentions of the public authorities; to implement plans bearing in mind the traditional autonomy of higher education institutions.

Attention has been focussed on three main areas: the intake of students; the fixing and distribution of total resources; the planning of the structure and content of studies. The resource factor is, of course, the central dimension in this connection, but the two other factors also have important financial implications and consequences.

By means of a system of central planning it has been possible to a large extent to bring about a situation in which students are admittted to courses with good rather than bad employment prospects and to courses that are rationally distributed among the institutions. Student choices also reflect this new rationality; partly no doubt because the admissions system by fixing the number of places at individual courses and institutions, signals where it is realistic to secure a place given the marks obtained at the upper secondary school-leaving examination as the entrance criterion. The system also signals which courses are likely to offer good employment prospects.

In Denmark, admission policies are closely linked to the availability of resources. A norm-based budget model has been developed in which the number of students is the primary determinant of the allocation for full-time equivalents (teachers and other staff), salaries and other costs. The allocation is also related to the type of courses followed by the students, these having to lead up to approved examinations. Thus, by the integrated planning of admissions and financial aspects, courses can be reoriented in the desired direction.

This budget model has been supplemented by new planning instruments. A percentage of the total appropriation is now being set aside for the establishment of so-called "pools" which are to be allocated to special areas of activity in the course of the preparation of the annual finance bill. Among current special activities mention may be made of internationalisation, bio-technology and interdisciplinary educational development.

The new system has taken the universities out of their isolation and into the political world of central planning. However, the transformation does not stop there. Under the rubric "Open Education in an Open Society", the Minister of Education is seeking to engage the whole education sector in a more transparent and natural interaction with the surrounding community. While reducing the amount of detailed interaction with the political and administrative centre, the intention is to bring about a much closer and more flexible interaction between the educational sector and trade and industry, international agencies, and non-traditional students through, for instance, open university activities and attending courses on a part-time basis.

The change also comprises a number of financial aspects, including the possible introduction of fees for certain higher education courses -- an unprecedented initiative. Institutions were also recently given the formal option of raising revenue for their own consumption by marketing courses and other "products" (for example, short, special-purpose courses),which lie outside the traditional disciplines of institutions. There are also proposals for decentralisation.

There is recognition that institutions must be able to strengthen their managerial capacity if they are to fulfill their tasks effectively. In general, discussions today about higher education contain ideas and arguments clearly distinguishable from the debates which took as their point of departure the student discontent at the end of the 1960s. These new ideas constitute the basis for the present administrative structures and competences of higher education institutions.

Much has happened. Some of the changes might have occurred without the initiatives described here. There has been a good deal of debate and strong opposition to the changes from some quarters.

CHANGING PATTERNS OF FINANCE IN HIGHER EDUCATION

I. INTRODUCTION

In Denmark, universities and other post-secondary institutions are the direct responsibility of the State, which provides almost total funding. Legal regulations and Ministry guidelines embrace such matters as admission requirements, validation of study programmes, and formal conditions for the award of graduate and postgraduate degrees. A very important regulating instrument controls the number of student admissions.

Altogether there are about 70 institutions offering higher education in Denmark. Of these, 66 are under the administrative supervision of the Ministry of Education's Directorate for Further and Higher Education (DVU). There are 14 institutions of higher education and research:

3 universities
2 university centres
2 dental colleges
1 school of pharmacy
1 veterinary and agricultural university
1 technical university
3 schools of economics, business administration and modern languages, and
1 school of educational studies.

For the purpose of this paper, these will be called universities and treated as the focus of attention.

Other institutions of higher education include 8 State recognised engineering colleges, 3 schools of economics, business administration and modern languages, 4 schools of social work, 8 schools of physio- and occupational therapy. Because of their relatively small size these institutions are administered in a slightly different way from the universities. The Ministry of Cultural Affairs has responsibility for 6 institutions (2 schools of architecture, 2 academies of music, 1 school of fine arts and 1 school of librarianship) which are not covered by this paper.

II. CHARACTERISTICS

Most university courses are long with an officially stipulated period of study of 5 to 6 years, leading to the "candidatus" degree, which is approximately equivalent to the master's degree in the united kingdom and the

United States. Postgraduate courses are offered for the licentiate degree (equivalent to the Ph.D in the United Kingdom and the United States) and the doctorate. The actual time taken to graduate is often longer than the regulatory minimum, sometimes up to 10 years. As a result, graduates may be between 25 and 30 years old. There are no tuition fees, but only a limited number of students are admitted each year.

With few exceptions, all studies are full-time. At the schools of economics, buiness administration and moden languages and at most of the non-university institutions, there is greater variety in the levels of and arrangements for the studies.

The 1973 Parliamentary Act on "The Administration of Institutions of Higher Education", with subsequent amendments, lays down a similar structure for all the institutions which fall under the Ministry of Education. Influenced by the student troubles after 1968 and the administrative problems arising from the very rapid growth in the education system which took place in the 1960s and the beginning of the 1970s, the Act introduced important administrative reforms. Thus, there was to be wider participation in the internal decision-making process. The Act led to the rupture of traditional professorial power by establishing a number of new bodies, representing all staff groups (teaching as well as auxiliary staff) and students.

Developments during the 1960s and the 1970s

Since the 1960s, higher education in Denmark has been characterised by comprehensive planning and administrative measures carried out by the State as well as by an intensive political debate. The increased political interest was -- in Denmark as in most other parts of Europe -- reflected in a heavy expansion of the educational sector. This expansion, not least in Denmark, assumed the form of a huge development of humanities and social sciences courses at the old universities. The more technically and commercially oriented courses, as for instance the courses in engineering and business economics -- which in Denmark are primarily offered at independent institutions -- only expanded to a very limited extent.

As the problems in the area became more and more apparent to everyone -- it was not just a question of graduate production, totally out of step with the demands and needs of society -- the possibility arose for the central authorities to consider priorities and take the necessary administrative measures.

In 1970, the Minister of Education requested the Council for Higher Education to elaborate a plan for the development of higher education until 1989. This plan for "an overall planning effort in the field of further and higher education in the period 1974-1987" (the General Plan), which the Council published in 1974, has since constituted the basis for central planning and administration efforts.

In 1974, a special Directorate for Further and Higher Education was set up with the Ministry of Education. With this new administrative structure, the organisational prerequisites for centralised planning and administration were created.

Focal Issues

The reform programme begun in the early 1970s took as its point of departure the employment problems facing university graduates, the bottlenecks in the education system, the huge number of applicants to the institutions (in spite of the falling age cohorts), the debates about the autonomy of the institutions, and problems with the State budget. A number of the current problems are identical with those of the 1970s, but there have also been considerable changes in the past decade. Structures and techniques have been established which have aroused both controversy and opposition, but which have also brought about positive changes. All problems have not disappeared, however, and the debate about ways and means continues.

The administrative instruments which were applied in conformity with the recommendations of the General Plan have influenced the financial framework for institutional development. It has proved necessary to supplement them with new and selective initiatives on a level with the complex administration structures which prevail in Danish universities. For the moment, the Ministry of Education is trying to encourage individual institutions to develop educational activities which are in accordance with the needs of society.

III. FINANCING MECHANISMS

From the beginning of the 1970s up to the present day, the central problem in Danish educational policy-making has been how to ensure a reasonable balance between the supply of labour created by the education system and the future needs of the labour market. The increase in the central authorities' administrative concern has been shown most clearly by the establishment of a central planning body, the Directorate for Further and Higher Education (the Directorate), and by the publication of the General Plan, which introduced many of the procedures now being used. The guiding principle of the Plan was that the student intake was to be related to manpower requirements and the more efficient use of resources in the functioning of higher education:

> Society has no interest in providing higher education courses to more students than, according to estimates, there will be a need for in those professional areas for which the individual courses are designed. (The General Plan 1974, p.38).

In other words, educational objectives were to be pursued at the lowest possible cost. The goal was effective courses with the lowest possible drop-out rate and graduation within an officially stipulated period of time. (Ibid, p.40).

The reform proposals fell into three categories. First, methods for determining the size and distribution of the annual intake; secondly, methods of resource allocation; thirdly, a study structure proposal. The central point is the method of resource allocation. The methods for planning the size

and distribution of the annual intake have, however, both financial purposes and consequences and must therefore be taken into account. The study structure proposal differs from the two other categories, but is becoming more important. We will next elucidate the planning and administration initiatives which have been taken.

Planning the Intake

The methods for planning the intake have been said to be the focal point of the reforms in higher education (Christensen, 1986, p.36). The General Plan proposed that an annual quota was to be fixed. This proposal was implemented in 1977 after adoption of the Act on the Regulation of Admission (1976) which made it possible for the Minister of Education to fix the maximum number of students to be admitted to the various courses of higher education (Act No. 315, 1976). The establishment of this system has provided the Directorate with an important instrument for making new prority decisions among individual courses.

Overall admission to courses is approximately 20,000 study places per year, which corresponds to about 27 percent of the age cohort. The governing principle is that, within a total framework of admission, a central decision is made as to the number of places in each course. This decision concludes each year with the elaboration of the finance bill.

The distribution of study places is based on forecasts of labour-market trends, but also takes into consideration the preferences of the applicants themselves and existing capacity in the form of teachers and buildings. Within the fixed number of places, admission is granted to applicants with the highest marks in the upper secondary school-leaving examination. The examination marks may be increased by up to 20 percent for those having two years of practical work experience. A limited number of places is reserved for applicants who have not passed the examination.

Creation of the new admissions system has given rise to a need for further regulations. When a great number of students is directed towards different courses, it will always be necessary to regulate the available resources accordingly. The link between the planning of the intake and the method of resource allocation is a central part of the reform proposal contained in the General Plan.

Methods of Resource Allocation

Until the end of the 1960s, individual institutions put forward their own budget proposals. This procedure meant that the Ministry of Education was in a very weak position when it came to reallocating resources among institutions. The General Plan recommended that resources be allocated according to a centrally decided framework.

One of the key questions was how to determine needs. According to the General Plan:

> On the resource side, this requires a division of the budgets of the institutions according to the objective of the appropriation. (Ibid, p.130).

As the basis for such a division a norm should be established for the appointment of teachers in relation to the number of students.

In the light of this it is felt that the need for teachers on the teaching side should be based on centrally fixed norms as to the number of students per teacher within the larger subject areas. (Ibid, p.104).

The proposals for a division of the budget into activity areas and for the establishment of a norm for staffing levels in relation to the number of students clearly constituted a rupture with traditional practice whereby the budget was autonomously administered by each institution. The budget reform was designed to reduce the autonomy of the institutions and to increase the ability of the Ministry to make resource-related priority decisions. It took effect in 1981.

The admissions system and the budget model can be considered as inter-dependent planning instruments for creating a rational central planning system. The main principle is that budgets are being split up into the activity areas of the institutions as opposed to the previous practice whereby the institutions received a global amount to be administered by themselves autonomously. By using a finely-meshed division into activity areas, the central budget agency will obtain considerable influence over the development of individual institutions. As the model is also based to a very great extent on the growth of student numbers, which can be regulated through control of the intake, it seems clear that the central authority now disposes of an advanced planning, and not merely a neutral, budgeting instrument. With the budget model it has become possible for the central authorities to arrive at significant resource-related priority decisions among the subject-areas of the institutions.

The Budget Model is thus a Framework-Allocation System which:

-- is based on norm budgeting;

-- fixes a maximum appropriation, a maximum sum for salaries and a maximum number of full-time equivalents for each institution;

-- operates through a division of the budgets of the institutions into main areas of activity such as research and teaching;

-- bases the resource allocation on the teaching side on centrally fixed objectives for the number of students per teacher full-time equivalent within certain subject-areas, that is, the student/teacher ratio;

-- sets activity objectives: an activity is measured by the number of courses completed, not by the number of students enrolled;

-- links resource allocation to actual student activity, thereby establishing the so-called "taximeter" principle.

The Budget Model is also an Information System since:

-- it provides knowledge about the above-mentioned parameters between the various levels of the budgeting system.

In a previous OECD paper about how the budgets of higher education institutions are to be administered in the '980s, the Danish Budget Model was cited as an example:

> ... the aim will be to facilitate the redeployment of public resources within institutions, between similar or comparable institutions, as well as between various sectors of higher education. The Danish reforms are designed with this in mind. (OECD, 1983, p.51).

With the Act on the regulation of admissions and the Budget Model, the Danish Ministry of Education has acquired power to control the framework of higher education courses and establish new priorities among the different courses. But it has turned out that, in order to influence the development of individual courses, set up new courses and initiate reforms of the study structures, additional administration instruments are required. These will be explained later on.

IV. STUDENT SUPPORT

As already stated, there are neither tuition nor registration fees, and therefore student support has nothing to do with the financing of institutions. Student grants are awarded by the State and are the only source of support of any significance. There are a few discount facilities and scholarships. The grant is intended to cover the cost of living and the purchase of books and learning materials. As a rule, the grants system has always been based on the principle of equality of opportunity. Everybody should have the right to follow a course of study regardless of his or her social background.

But the grants system must also be seen as an integral part of the education system. It is to be looked upon as an expression of the general priorities of society, and as such it will be funded in accordance with the estimated importance of producing qualified graduates. The cost of the education system is, in other words, a total package, which comprises student grants.

Evolution of the Student Support System

Immediately after the Second World War, there were no State run financial support schemes for students in Denmark. Studies were almost exclusively financed by means of paid employment, private scholarships or parental allowances. In 1952, the Youth Educational Fund (YEF) was established, a State run scheme which allocated support to those students deemed to be in financial need. It was the first example of a public initiative in the area of student support schemes, and it was based on the equality principle. But both the educational sector and the students were viewed at that time as a marginal concern.

At the beginning of the 1960s, the YEF was extended and the equality principle was reinforced by adoption of a socio-economic goal, according to which there exists a close connection between education and economic growth. In 1964, a State guaranteed scheme for bank loans was instituted.

In 1970, the State Educational Support Agency (SU) was founded, denoting a break with the previous criteria by which an estimate was made of a student's need for financial support. Fixed objective criteria were introduced. In addition to the goals already mentioned, the internal optimisation of the education system was prescribed. The reasoning was that, given sufficient financial support, students could avoid having to abandon or to drop temporarily out of courses. Paid employment had previously been regarded as something positive for the students' general experience. Now it was regarded as a problematic factor.

When the economic crisis became a reality in the mid-1970s, the need arose for a reduction in public expenditure which led, in turn, to a reduction of student support through the abolition of interest-free State loans in 1975. These loans were reintroduced in 1982 with one change: they were now to carry interest fixed at 3 percent below the bank lending rate during studies and 1 percent above on their completion.

At the present time, financial support is granted to all students. A condition for obtaining support is that the course to be followed be full-time and recognised by the State. The applicant must be a Danish citizen and at least 18 years old. The student must also be active, that is, must present him/herself for examinations and generally fulfil all course requirements.

Support is allocated in the form of grants, State loans and a State guarantee for loans by banks. It can be obtained throughout the officially stipulated period of study plus one year. The maximum amount that one student could obtain in the financial year 1986/87 in the form of State guaranteed loans alone, or in the form of a grant, State loan and State guaranteed loans, was as follows:

- Students in the age bracket 18-11 ..... DKK 39,399
- Students aged 22 and above ..... DKK 43,800

The allocation of grants and State loans furthermore depends on the applicant's financial circumstances. In addition to this, a distinction is drawn between applicants who live with their parents and those who live away from home. For students in the age bracket 18-21, the allocation of grants and State loans is further determined by the parents' financial circumstances, so that young people whose parents have high incomes or large fortunes will receive less support. The allocation of the maximum amount of support presupposes that the income of the applicant does not exceed DKK 55,899, including the grant. The grant does not have to be paid back. In the financial year 1986/87, it amounted to DKK 15,800 for students living with their parents and to DKK 26,000 for students living away from home. There are several steps between these two amounts as the amount of the grant is also graded according to age.

The State loan may only constitute an amount equal to 50 percent of the grant obtained. It carries interest during the time of study which amounts to 3 percent below the bank lending rate applying at any given time. The bank lending rate on 15 February, 1986 amounted to 7 percent. On completion of studies, State loans carry interest which amounts to 1 percent above the bank lending rate.

Finally, a student has the option of obtaining a State guaranteed loan from a bank. Here the interest is fixed by the individual bank and it may vary, therefore, but it generally amounts to 10-12 percent a year and 1 percent above this on completion of studies. As opposed to the grant and the State loan, the State guaranteed loan does not depend on the applicant's or parental income.

On completion of their studies, students must start paying back the loans. The reimbursement must begin at the latest one year after completion. The borrower makes an agreement with the Educational Support Agency or the bank, or both, about the more detailed conditions for reimbursement, including the amount of the instalments and the duration of the period of reimbursement, which must however not exceed 15 years. Exemptions to this rule may be granted.

Living Conditions

How is the support adapted to the needs of students? It is appropriate to consider the following two problem areas:

-- The students' actual use of the existing support schemes, particularly the extent of paid employment and its relation to the grants.

-- The financial situation of students during the period of study. Here a comparison will be made with the situation of other young people in the age group.

The amount of paid employment partially explains the extent to which the support system fulfils the needs of the students and, at the same time, influences the effectiveness of studies. The financial situation of students must be compared to that of young people as a whole. There is growing awareness of the connection between taking a long time over a degree and being in paid employment. This is one of the reasons for the impending increase in financial support. The income gained from paid work constitutes a considerable part of the income of students and will, in Table 1 in the Appendix, be used to measure the amount of such work actually undertaken.

It appears that there is a clear connection between paid employment and age. Older students generally work more than younger ones, this being a consequence of the fact that financial commitments typically increase with age and the time limit on financial support. The table shows that a fairly high percentage of students' income was covered by paid employment.

In 1987, an enquiry by questionnaire was carried out at the University of Copenhagen, which showed the distribution of permanent/occasional work among students in 1980 and 1986 respectively.

Table 2

The distribution of replies about permanent/occasional work in 1980 and 1986, percent

	1980	1986
No work	7	10
Occasional work	14	33
Permanent work	78	56
Total:	100	100

Source: The University of Copenhagen; students at the University of Copenhagen -- a study of their situation 1987.

There is a trend towards spending less time in paid employment, particularly among younger students, the under 23 year-olds. In 1980, there was no particular difference between the age groups. This might indicate a changed attitude among more recent students. Part of the explanation may be found in the fact that whereas 35 percent of the younger students in 1981 were the children of university graduates, this percentage had risen to 50 by 1986.

It appears from the enquiry that 7 percent of the students live with their parents, whereas 50 percent live in an appartment, 15 percent in their own house and 14 percent in student residence halls. As the majority of students do not distinguish themselves from other young people as far as housing is concerned, it may be reasonable to assume that the basic cost of living is not significantly different from that of other young people. Table 3 shows the available income of students and other young people, respectively for different age groups.

Table 3

All Figures in DKK

Students in unpaid education and training courses	Available income	Non-Students	Available income
15-19 years	15155	15-19 years	62030
20-24 years	41061	20-24 years	90194
25-29 years	56606	25-29 years	102964

Source: Statistical News. A 26 - 1982
Students' Income 1989

It can be seen that, in spite of the large number of students in unpaid employment, the 20-24 year-olds compose about 45 percent and the 25-29 year-olds about 55 percent of what the corresponding group of non-students command in available income.

These differences give a picture of the incomes which the students would be able to obtain if they were not studying, a factor of importance when a young person is contemplating whether to go on to higher education or not. Furthermore, a young person will have to consider his or her future income on completion of studies. General salary trends in society must be supposed, however, to have modified the importance of this factor when it comes to wanting to pursue a higher education course.

Proposal for a New Students' Support Scheme

In December 1987, a proposal was elaborated for a revision of the State student support scheme, which will probably be adopted in 1988. According to this the State guaranteed loans by banks will be abolished, and the support system will subsequently consist only of State loans and grants. Under the new system, only 18 year-olds will be dependent on the financial means of their

parents. The allocation of a maximum grant and loan presupposes that the wealth of the applicant does not exceed DKK 100,000 and that the annual income does not exceed DKK 34,000, excluding the grant. In the support year 1988/89, the maximum grant should be as follows:

- Students living with their parents ..... DKK 22,000
- Students living away from home ..... DKK 36,000

In addition to the grant, both the above categories can obtain maximum State loans of DKK 16,000. This loan will carry during the time of study a 4 percent interest rate per year. On completion of studies, the interest will be 1 percent above the bank lending rate applying at the time: on 15 February, 1986, it amounted to 7 percent. As opposed to the previous regulations, State loans no longer have any relation to the size of the grant.

The new system will restrict support to the officially prescribed period of study, and at the same time a new "rebate" (the "clip card") will be introduced, which will make the system more supple. The idea is that students will decide themselves when they want to use the support in the course of their studies. Adoption of this proposal will imply that the loan part of the support system will be considerably smaller. It is, precisely, the loans which have caused great problems to students, as studies spread over a long duration have, in some instances, led to insurmountable debts. In many cases, the State has had to meet the guarantee and pay the loan. Part of the reason for abolishing the old loan system was this very obligation. But considering that the officially prescribed length of study is now to coincide with the period of the grant, it is obvious that the intention is to cut the time spent on studies. This does not lead to any purely financial changes in the system as a whole since the financing of institutions, as already pointed out, is decided according to the level of activities and not according to the number of students enrolled. But it will be profitable from a socio-economic point of view if the average age on graduation can be lowered.

The clip-card system aims at improving the student's ability to arrange his or her own course of study. The division into monthly clips makes it possible for the student to make personal decisions as to when he or she wants to use the support. If students know that they will not be active for a period of time or if they wish to follow only a certain number of courses, they can save their support for later on. The clip-card is divided into a basic card with 48 monthly clips and an advanced card as a supplement for studies of a long duration. The advanced card can only be used when the remaining time of study corresponds to it. For example, a course of study officially prescribed for 5 years will consist of a basic card of 48 clips and an advanced card of 12 clips. In this case, the last 12 clips can only be used when there is one year left of the prescribed duration, and as the advanced card makes it possible to make double clips, that is, 2 clips per month, it encourages students to finish their studies rapidly when they have reached such an advanced stage.

In the proposal for a new student support system, there is thus an attempt to obtain a much greater degree of control than was the case with the old system. But there is no guarantee that the problems of the old system will be solved. On the one hand, there is the question of the influence of the financial situation on the duration of studies. On the other hand, the clip card system may very well prolong study courses as it makes it possible for the student to keep the support for a later date. But the State guaranteed bank loans which have created problems for a great number of students will disappear and with them the most controversial element in the student support system.

V. EFFECTS OF THE FINANCIAL ARRANGEMENTS

The reforms described above in relation to the administrative structure of higher education institutions, the admissions system and the budget reform, have led to important changes. The central planning of admissions has led to there being a pronounced transformation in the subject-related profile of courses so that those that are technical and commercially oriented have been given a higher priority whereas the arts, in particular, have been given a lower priority. The growth in the number of admissions, applicants and the rate of unemployment distributed over main subject areas can be seen in Table 4 in the Appendix. The trend indicates that one of the objectives of the admissions system, namely, reorient courses towards courses with good employment prospects, seems to have been met more or less. It also appears that the number of applicants follows, to a certain extent, the relative development in the number of students admitted. This may indicate that young people are tending to seek courses with good employment prospects or with lower rejection rates and that a certain self-adjustment to labour-market realities is thus taking place. It may be assumed, therefore, that information as to the employment prospects created by individual courses has operated as a complementary administrative instrument to the new admissions system. Since the introduction of the Budget Model in 1981, a large number of decisions has been made regarding priorities among the main subject areas. The chief goals may be formulated as follows:

1. greater priority should be given to short, medium-length and long technical and commercial courses;

2. lower priority should be given to medium-length and long courses which are primarily aimed at employment in the public sector;

3. the number of long courses at universities and other institutions with a broad employment-oriented aim should be "stabilized".

The effect of the new priorities appears from the table below:

Table 5

Appropriation share in 1986, relative to share in 1981

Main Subject areas	Hum	Soc Sc.	Nat Sc.	Tech	Med	Other act.	Total
Universities	0.82	1.23	0.94	-		0.80	0.98
University Centres	0.91	1.07	2.00	1.22	-	0.97	1.09
Other institutions of higher education	1.07	1.56	0.89	1.06	1.15	1.14	2.10
Total:	0.89	1.30	0.94	1.09	0.89	1.06	1.00

Remark: The Table indicates the relative share of the appropriations for 1986 of the respective institutions and main subject areas as compared with the relative share of the appropriations for 1981.

The abbreviations of the subject main areas cover from left to right: Humanities and theology, social sciences, natural sciences, the technical area, the medical area as well as "other activities" (which are appropriations for libraries. Computer centres and the joint expenses of the individual institutions).

Source: The Ministry of Finance, 1989, 1986.
(Christensen, 1986, p.47).

The new priorities among the main subject areas are, of course, a consequence of the previously described trends in admissions.

Following the introduction of the Budget Model, it has been possible to note increased productivity in teaching in addition to new priorities among the main academic areas. This has been a direct consequence of the fact that the model operates with norm budgeting of resources to the teaching side in

the form of the student/teacher ratio. The increase in productivity has been noted in that the student/teacher ratio has been increasing within most of the main areas throughout the past couple of years, as will appear from the table below, whereas the increase in the student/teacher ratio has not resulted in notable decreases in the completion rate.

Table 6

Resource-demanding students per teacher full-time equivalent

Year	Hum.	Soc.Sc.	Nat.Sc.	Techn.	Med.
1983	13.2	18.2	8.0	7.5	14.7
1987	15.0	19.9	8.7	9.2	10.6

Source: Resource-demanding students per teacher full-time equivalent.

The increase in productivity can also be illustrated in the development of the appropriations per student distributed over main subject areas as appears from the table below.

Table 7

Appropriations per resource-demanding student distributed over main areas. At 1987 prices.

DKK	Hum.	Soc. Sc.	Nat. Sc.	Tech.	Med.	O.A.	Average
1983	55,785	28,378	131,469	86,566	132,343	30,934	103,030
1987	46,470	26,179	110,890	62,300	108,030	28,040	6,090
Change %	- 17	- 8	- 16	- 28	- 18	- 9	- 20

N.B. In O.A., all resource-demanding students have been used as a basis for the calculation.

Source: Based on the Budget for the Ministry of Education.

The table shows that there has been an average decrease of about 16 percent in the cost per student full-time equivalents (actually completed courses). The considerable redistribution among the main subject areas and among individual courses has not been brought about without considerable opposition from the institutions. Several explanations for this opposition may be adduced. For one thing, institutions do find, to a certain extent, that the resource allocation by means of the Budget Model infringes on their autonomy.

Another essential explanation is mentioned in a recent study of the reorganisation process (Christensen, 1986); it argues that "the problems involved in the reorganisation process seem to lie in the fact that the agent who is supposed to take care of the general interest -- in this case the Ministry of Education -- does, to a great extent, lack the professional expertise and legitimacy. On the other hand, it cannot be expected that the agents who do possess the professional expertise and legitimacy, i.e. the individual educational institutions, are willing to -- or able to -- consider the general interest on behalf of their own interests."

In order to take the sting out of this criticism the Ministry of Education has consulted the advisory committees for the principal disciplines. These committees give their advice about new subject-related priority decisions, changes in the intake as well as in a number of more specified cases. In spite of this, it has been difficult to involve institutions in the necessary interaction with the Ministry of Education concerning the reorganisation of study structures. Therefore, the Ministry of Education has recently introduced new planning instruments.

New Planning Instruments

With the admissions system and the Budget Model, the central authorities acquired to a very great extent control over the framework of courses and the opportunity to make decisions over new priorities in the various disciplines. But the development of individual courses, the introduction of new courses and reforms of study structures remain within the jurisdiction of the individual institutions. In order to make new decisions over priorities the institutions will have thus to be actively involved in the actual reorganisation process.

One of the problems has been how to persuade the collegial administrations of the universities to make these new decisions with regard to dropping outdated courses and creating up-to-date ones. The Danish Minister of Education, Mr. Bertel Haarder, (in 1985) clearly voiced his own doubts about the capacity of individual institutions to restructure their courses:

> The decentralised planning has, however, suffered from a number of weaknesses. From time to time one has felt inclined to ask whether the individual educational institutions have performed a planning effort worthwhile mentioning. Or whether it has not rather been a question of a dogfight where everybody was fighting everybody for their own private rights, and where new priority decisions from, for

instance, research-related quality requirements, have become a rare occurrence.

(Ugeskrift for Jordbrug (weekly periodical for agriculture), 1985, No.45, p.1399).

It is also possible to view the Ministry of Education's new planning initiatives in the same light.

Among the new initiatives can be mentioned the subject-related, long-term planning for institutions. The idea of long-term planning is that each institution should elaborate development plans for teaching and research. These are then to form the basis of the advisory committees' recommendations to the Ministry with regard to the funding of the institutions. The planning period is 7 years -- from 1986 to 1993 -- with an expected new planning round every 3 years, so that the development plans always anticipate 4 years ahead. The long-term plans provide the Ministry with a considerable inflow of information about developments within individual institutions.

But the Directorate has also tried to develop a system of control by incentives. The planning takes place by means of an interaction with the individual educational institutions, but the Ministry takes the lead and draws the necessary conclusions, that is, the allocation of resources to individual courses. The resources are made available to a number of budgetary pools which have been established for this purpose. This system of pooling will be described below.

The linking of financing with long-term plans to revise courses in the light of the Ministry's wishes is likely to benefit individual institutions. They are also to be given encouragement to propose new ventures by the setting up of a budgeting incentive system.

The Pool Budgeting System

The pooling of budgets came into force when the Directorate was making its budget proposals for 1987. It was partly necessitated by the budget reductions which were imposed at short notice on the institutions in 1986 and which met with violent opposition. On top of rising demand for long-term planning, individual institutions found that the economies proposed in the appropriations Act for 1986 were playing havoc with their forward budgeting, and they demanded, at the very least, longer notice in future. In the light of this criticism, the Directorate changed its budgeting guidelines with a view to giving institutions a minimum limit for the funds allocated during the forthcoming financial years. According to the Directorate, this minimum limit was fixed:

> In order to give the institutions a minimum guarantee and at the same time in order to provide funds for reorganisation purposes, ... reserves are set aside by reducing the institutions' appropriations in advance, as the total framework of the Directorate...is expected to be unchanged or slightly increasing. (DVU, 1986, p.3).

To put it bluntly, a cut has been imposed on each institutional budget which can be partially restored from the pool for reorganisation purposes. At present, the reduction amounts to approximately 1 percent per year, with the presupposition that the funds are given to the institutions. Or as the Directorate formulates it:

> Using this budgeting form, nothing is taken from the institutions on the whole, but the amounts are reallocated and at the same time the institutions have been given some limits within which they can make their planning. (DVU, 1986, p.3).

The pools system affects the administrative relations between the individual institutions and the Ministry of Education principally in two ways. First, it makes it easier for the Ministry to carry out economies, since some funds are placed in advance in central pools. Secondly, and most importantly, the Ministry has acquired an instrument for encouraging the reorganisation of courses.

When economies are to be made in the field of higher education, the pools will be turned to first. How the pools are used is not of itself very significant. Since this will only result in a general pro rata saving and will thus be only an expression of an incremental process of economising.

From an administrative point of view, the pools only become interesting when they are used for the distribution of funds to individual courses. They can then serve as administrative instruments for encouraging institutions to formulate proposals which conform with the type of courses that the Ministry wants to see strengthened with a view to achieving overall goals, primarily by creating a match between the supply and the demand for highly qualified manpower.

The system of pooling represents a break with the previous form of financing by virtue of its general framework allocations and by relying to a great extent on gearing funds towards programmes. The system is still too new, however, to permit a firm judgement on its ability to stimulate institutions to make changes in the structure of disciplines.

It remains an open question whether the institution of the pools system will strengthen the will of collegiate administrations to select priorities given the constraint on resources. There will be obvious conflicts of interest between those faculties and courses which, according to the labour-market situation must be given either a higher or a lower priority. But there is no doubt that a new dimension has emerged in the financing structure of higher education courses.

In addition to the changes described above in what may be called the financing system of the General Plan, there is a trend towards the adoption of alternative forms of finance, such as the sale of external services, the introduction of user payments and a number of other initiatives. The possible development of these forms of finance will be considered below.

VI. FUTURE DEVELOPMENTS IN FINANCING

The financing of higher education has been a central element in a continuing planning process. It has been not only a question of a technical/administrative development with the creation of a so-called taximeter system with norm budgeting and activity-related resource allocation, but also, to a very great extent, of a political development. The technical/administrative instruments have been devised in response to politically fixed prerequisites such as intake numbers and student/teacher ratios. Moreover, higher education, like other public sectors, such as industry and energy, has been politicised and included in a broader structural and economic framework.

It is no longer enough that each student should gain something positive from his or her efforts, notably subsequent employment. Higher education institutions must also produce outcomes of value to society in general (whether it be in the sphere of technology, export, health or the environment). It has led to major reorganisation initiatives in the traditional financing system as well as to the designation of special areas eligible for particular appropriations where possibilities have been created for rapid growth. This applies, for instance, to biotechnologies, the environmental area and to internationally-oriented courses (research is even more characterised by emphasis on such special areas).

The financing of the courses has thus been set in a wider and more complex perspective which is reflected in the increasingly elaborate system of allocations. The traditional system is being supplemented by resort to new sources and structures.

Up until now, the most important factor in this development has been the set of rules governing the sale of external services, which breaks with the main principle in the public budget and appropriation system whereby any income is to be paid to the treasury and cannot be used by the institutions. The new rules enable institutions, if they can find the necessary means, to extend their traditional activities or to embark on new ones, such as special courses and consultancy services, if they can themselves provide the necessary resources. This possibility is being more and more taken up. It should be added that the institutions are receiving funds from the private sector to an ever increasing extent, particularly in connection with research projects. As an illustration of the immediate importance for the Technical University of Denmark (one of the institutions cited as having made the greatest progress in this field) of receiving both public and private funds -- including funds obtained in connection with co-operative agreements, the sale of services and private foundations -- we can refer to the following operational expenditure for 1985:

- operational expenditure and grants: 458.2 million DKK
- public grants, including grants in connection with co-operation agreements (excluding research council grants): 28.5 million DKK
- sale of services: 11.7 million DKK.

One of the side effects of the new sources of financing may be that, because less hampered by narrow rules, they may attract the most dynamic and creative researchers to the institutions. This may take place at the expense of the fundamental activity of teaching.

In several areas, courses face acute recruitment problems and difficulty in keeping staff. Institutions would like to have some degree of freedom from the fixed wage agreements which have been settled for the whole public sector so as to permit a more individualised pay system.

New Concepts and Elements

New concepts are being introduced into the debate about the financing of higher education and about the public appropriation system as such. Openness, quality, flexibility, reorganisation, user payment, decentralisation, rationalisation of rules and regulations, self administration and autonomy are some of the central concepts. These reflect the debate which has taken place in Denmark in recent years about the role of the public sector in society in general. They may also imply a change in educational policy-making, including the financing of higher education. The signals are ambiguous enough and, as will appear, in many points contrary to the developments described. They affect the discipline-related bias of institutions and can thus be said to encroach on their autonomy to a greater extent than previous financial initiatives. At the same time, initiatives are being launched in favour of increased liberalisation and decentralisation.

The current debate reflects to a great extent the increased politicisation of higher education and the complexity of the overall political situation. The complexity does not make it easier to predict or implement changes. In the following paragraphs the official goals will be taken as the point of departure since they constitute the safest prediction of what will characterise future developments.

Transparency is the key word in the Minister of Education's thematic article for 1987 entitled "Open Education in an Open Society". He also placed great emphasis on openness towards "those who are to receive the graduates":

> ...it is important that some regard is paid to the recipients of the "products" (the graduates). It is of importance for the quality, for the renewal and for the employment of the graduates. Therefore, the "recipients" must have considerable influence. (Haarder, B. 1987).

The relationship to trade and industry is no longer only a question of hitting the right employment target so as to ensure that the greatest possible number can find relevant jobs when they graduate. The quotation also expresses the wish to start an exchange process which, on the one hand, through input from an orientation towards trade and industry, may improve the quality, the ability and motivation for reorganisation in the educational sector and which, on the other hand, may open the eyes of trade and industry to the possibilities of a more active co-operation with higher education institutions. These areas may also be seen as examples of attempts to give greater priority to furthering certain development sectors in industry.

Co-operation takes place through the setting up of committees with a broad representation of all the interested parties. A couple of years ago technical courses were being reviewed by such a committee. At present, another committee is preparing proposals on how commercial courses should be reorganised in order to contribute to improving the export trade. Yet another committee is looking into how the educational sector could improve conditions for the Danish tourist trade.

A new element emphasizes the importance of creating a closer relationship between educational institutions and trade and industry:

> By means of the payment principle we counteract the "educational inflation" which always occurs when those who make the demands do not themselves feel the cost of their implementation. Particularly, further education courses will be characterised by employer and user payment which at the same time will ensure responsiveness to the changing needs of the users and the trades". (The Minister of Education's thematic article, 1987). (Haarder, B. 1987).

The principle of user payment can thus be seen as a means of sharpening the awareness of both the users (the students as well as trade and industry where it is a question of employer payment) and the institutions as to value for money and getting all the parties concerned interested in a dialogue. The closed attitude which previously characterised the life of institutions was not just caused by their desire to protect their independence, but also by the indifference of the outside world which did not seriously care about what was going on inside the "ivory towers" in spite of, or perhaps because of, the fact that higher education was 100 percent financed out of taxes, that is, financed by a large majority of the population.

The introduction of the user payment principle infringes the dogma of <u>free education</u>. But as the quotation from the Minister's statement shows, the proposal does not affect traditional graduate courses, but only the part-time and further education sector, where user payment is already a well-known phenomenon.

In addition to the search for quality and need for reorganisation, one of the objectives of adopting market solutions in the financing of education in Denmark is to relieve the public sector of part of the cost burden by raising supplementary funding from private industry and commerce. Thus, the acute financing situation was the background for the presentation of a bill in 1986 concerning partial user payment (15 percent of the total operational expenditure) for one of the part-time courses in business economics which had experienced a record-high intake in recent years (the bill was not adopted).

The position of the two central dogmas of free education and free admission in the debate and their mutual importance reflect the political priorities of the present government and the liberal Minister of Education. Although free admission has for a long time been modified in consideration of

the finances of the State and the reality of employment prospects, it remains a very clear political goal and it is likely that new attempts will be made to reach an agreement about the provision of more higher education places within a fixed or falling appropriation framework by means of user payment.

For the time being, user payment will only apply to part-time and further education courses offering good employment prospects. If it were to be extended to cover the large group of traditional graduate courses, it would be possible from a State financial point of view to offer more places. With increased application of user payment and other non-public forms of financing, it would be no longer the responsibility of the authorities alone to ensure value for money and would thus no doubt be easier for the government to implement the liberalisation of higher education. As will be shown below, there are plans for different forms of liberalisation. But nothing indicates that there will be any attempt to infringe the principle of free education or to introduce user payment to the same extent as, say, in the United Kingdom or the United States.

Other new elements concern <u>decentralisation, "free university" experiments and management</u>. The idea of "free universities" and "free departments" covers a wish, on an experimental basis, to permit exemptions from a part of the existing set of rules and regulations and not only the financial rules. Similar experiments have been initiated such as the "free municipality" arrangement between some municipalities and the Ministry of the Interior. The idea has been received with interest by the institutions who wish to prove that the existing rules are a great burden on them and by politicians who, among other things, regard it as a possible means of developing new forms of administration in the institutions. On 21st January, 1988, the Minister of Education published a press release in which he invited the institutions to present proposals as to how these ideas could be carried through in practice. In this context, he emphasized the importance of the interaction between trade and industry on the one hand and higher education institutions on the other:

> I invite the institutions of higher education to look into the matter and to present concrete proposals as to how we can proceed with the idea. We need good proposals and ideas as to how we can give the institutions greater freedom from tight rules and as to how the administration can be strengthened at our universities and other institutions of higher education. We need a stronger administration which the surrounding world can find and make agreements with and which has the means to assume the "pedagogical" supervision, so that the quality will improve -- both of the teaching and of research. A lot can be done under the present Act of administration, but if there are wishes to go beyond the limits of the Act, I am very willing to go to the Parliament with a bill which will contain the necessary authorisation like it was the case with the Act on the free municipalities. (Haarder, B. 1987).

The administration of the institutions has been a constant item on the agenda during the whole of the period in question. It began with a clash over the traditional power of professors and has recently been revived by an OECD review of national science and technology policies in Denmark, including the administration of the institutions. According to the review:

> The organisational and managerial system at Danish universities, which is regulated by law is very unwieldy. The university system requires extensive formal participation from teachers and students, at several levels, in the decision-making process... Because of this very high degree of participation in the decision-making process, it is probably not realistic to expect the universities themselves to propose radical changes in the system. When the opportunity arises, the 1973 Act on university administration should be changed, reverting more closely to the previous system of government where subject areas were represented by their professions in the governing bodies. Such a change would facilitate a reduction in the bureaucratic system of research "pools" and allow the direct allocation of larger discretionary funds to the universities.

This recommendation has made an important contribution to the debate about the administration of institutions and has given rise to the desire for decentralisation and experiments with free universities. Against this background, the Minister of Education has begun discussions with the rectors on the administrative conditions in their institutions.

In the related area of vocational education and training a proposal for reform has been submitted to the relevant bodies. It is proposed to convert into practice a wide range of the above-mentioned ideas. It implies the decentralisation both of the subject-related and financial areas and it contains, among other recommendations, a taximeter system similar to the one used for higher education courses, only with a greater degree of economic freedom.

In addition to the existing financial instruments and considerations, there are current proposals which, through a change in the educational planning system and educational structures, may lead to cheaper and more effective courses of education: the introduction of bachelor courses, the establishment of an "open university" system with increased emphasis on part-time and further education courses, only to mention three of the most central and topical suggestions. The general characteristics of Danish higher education courses described in the introduction -- long, free and full-time -- may well no longer apply, therefore, in some years' time. Even though the present proposals have other aspects and intentions than financial ones and are not primarily discussed within a financial context, they would, if adopted, have consequences for the structures and techniques of financing higher education and the composition of the student body.

APPENDIX

Table 1.
The average size and composition of the amount, which is at the students' disposal, seen in relation to the gross income distributed by age - 1980.

Distribution in percent.				Of which					
Students in unpaid education and training courses	Amount at disposal	State-guaranteed loan	Gross income	Salary	Student grants	Social security	Other	Final tax	Available income
15 - 19 år	99,3	6.3	100.0	73.7	11.0	2.0	13.3	7.0	93.0
20 - 24 år	106,2	26.6	100.0	66.2	23.3	4.2	6.3	20.4	79.6
25 - 29 år	95,6	18.7	100.0	75.5	12.2	5.9	6.4	23.1	76.9

Source: Statistical News nr. A 26-1982
Students income 1980

Table 4.
Table of intake, applicants and rate of unemployment distributed on subject main-areas for 1979, 1983 and 1987.

		HUM		SOC.Sc.		NAT.Sc.		TECH.		MED.	
	COURSES	LONG	MEDIUM	LONG	MEDIUM	LONG	MEDIUM	LONG	MEDIUM	LONG	MEDIUM
INTAKE	1979	2320	1573	1808	1008	1255	-	591	1317	1340	360
	1983	2212	1361	2652	1970	1580	-	1369	1663	1260	502
	1987	2739	1637	3095	3493	2666	-	923	2527	1092	481
APPLICANTS	1979	2939	1692	2217	896	1502	-	601	1011	2021	1741
	1983	3408	1959	3199	2146	2396	-	1326	1954	2249	1881
	1987	4092	2373	3797	4674	2643	-	1604	3024	1584	1705
RATE OF UNEMPLOY-MENT	1979	12,2%	4,7%	4,7%	4,0%	-	-	-	-	-	-
	1983	18,1%	10,8%	4,4%	4,3%	5,6%	-	7,0%	2,8%	3,4%	2,4%
	1987	16,2%	9,0%	2,9%	3,1%	5,1%	-	4,9%	3,0%	3,5%	0,7%

Source: The enrolment Secretariat; The co-ordination enrolment and the Ministry of Education; Educational Guidance Paper

Table 8.
Appropriations distributed on main areas in 1987-prices.

Mill.DKK	HUM	SOC.SC	NAT.SC	TECHN.	MED.	O.A	TOTAL
1983	643.2	417.3	827.6	739.8	719.8	1436.4	4784.1
1987	537.9	468.9	744.6	748.3	647.1	1519.9	4666.7

Source: Based on the Budget for the Ministry og Education

Table 9.
The distribution of the appropriations on main areas in p.c.

	HUM.	SOC.SC.	NAT.SC.	TECHN.	MED.	O.A	TOTAL
1983	13.4	8.7	17.3	15.5	15.0	30.0	100
1987	11.5	10.0	16.0	16.0	13.9	32.6	100

Source: Based on the Budget for the Ministry of Finance

Table 10.
Resource-demanding students distributed on main areas.

	HUM	SOC.SC.	NAT.SC.	TECHN.	MED.	TOTAL
1983	11,530	14,705	6,295	8,315	5,590	46,435
1987	11,575	17,915	6,715	12,010	5,990	54,205

Source: Based on the Budget for the Ministry of Education

Table 11.
The distribution of the expenditure and the total expenditure distributed on types of institution in the following years 1973, 1980 and 1985. All figures are in 1985-prices

		SALARY	OTHER OP.EX.	GRANTS	TOTAL
Universities.	1973	1,242,241,110	485,684,640	64,064,250	1,791,990,000
	1980	1,400,545,280	559,988,000	78,177,280	2,038,710,560
	1985	1,197,099,000	488,967,700	62,978,000	1,749,044,700
University centres.	1973	54,306,990	38,999,610	612,900	93,919,500
	1980	236,017,600	92,569,600	3,732,800	332,320,000
	1985	235,197,200	88,392,500	5,303,800	328,893,500
Technical education	1973	638,880,480	204,316,020	22,122,450	865,318,950
	1980	571,013,440	182,444,640	27,515,200	780,973,280
	1985	546,822,100	192,775,300	28,346,000	767,943,400
Health education	1973	309,184,830	97,173,270	25,573,860	431,931,960
	1980	341,730,560	94,852,480	28,485,120	465,068,160
	1985	310,381,000	96,034,600	25,347,100	431,762,700
Commercial education	1973	154,961,100	45,100,800	4,320,000	204,381,900
	1980	208,240,800	54,673,760	4,930,240	267,844,800
	1985	227,265,100	72,546,900	5,764,000	305,576,000
Other higher education	1973	99,648,630	29,406,240	6,366,330	135,421,200
	1980	188,298,880	54,300,480	28,613,440	271,212,800
	1985	218,757,700	73,572,600	37,372,000	329,702,300
TOTAL	1973	2,499,223,140	900,680,580	123,059,790	3,522,963,510
	1980	2,945,846,560	1,038,828,960	171,454,080	4,156,129,600
	1985	2,735,522,100	1,012,289,600	165,110,900	3,912,922,600

NB: "Other op. ex" - Other operational expenditure.
Source: Based on the Budget for the Ministry of Education

Table 12.
Cost per enrolled student in various types of educational institutions. In 1985-prices.

Figures in DKK	1973	1980	1985
Universities	40,950	46,660	37,030
University centres	69,760	71,220	46,090
Tecnical education	119,210	102,910	63,100
Health education	133,230	117,560	102,560
Commercial education	19,700	19,640	13,910
Other higher educ.	82,750	62,630	69,190
TOTAL	52,235	53,177	40,068

NB: In 1973, Roskilde University Centre was the only university centre which had a student intake.

Source: Based on the Budget for the Ministry of Education

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